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Notice of Allowability	Application No.	Applicant(s)	
	10/650,395	SINGH, PRASHANT K.	
	Examiner	Art Unit	
	Yuriy Semenenko	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/03/2006.
2. ☒ The allowed claim(s) is/are 1-2,4-6, and 21-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Allowable Subject Matter

Response to Amendment

1. Amendment filed on 01/03/2006 has been entered. In response to the Office Action dated 10/03/2005, Applicants has amended claims 1, 4, 5. Claims 21 and 22 have been added.

Election/Restrictions

2. Affirmation of election is acknowledged. Applicant elects with traverse of Group I Claim 1-6 and 19-20 as stated in Response to Office Action filed on 01/03/2006, Claims 3, and 7-20 have been cancelled. Claims 1- 2, 4-6 and 21-22 are now pending in the application.

Response to Arguments

3. Applicant's arguments filed 1/03/2006 have been fully considered and they are found persuasive.

Examiner's Amendment

4.1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

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4.2. Authorization for this examiner's amendment was given in a telephone interview with C.W. Swantz (Reg. No. 46329) on February 10, 2006.

4.3. Claims 23-32 correspond to amended claims 7, 8, 10-14 and 16-18 added.

Please enter the following new claims.

4.3.1 Claim 23. (new) An apparatus, comprising: a housing; a substrate disposed within said housing; a plurality of metal layers, a first metal layer of said plurality of layers being disposed on said substrate; an inductor layer disposed within said plurality of metal layers; a circuitry for generating a negative capacitance, said circuitry comprising: at least two transistors; at least two resistors; each resistor of said at least two resistors being coupled to each at least transistors; and a capacitor coupled to a first transistor of said two transistors and a first resistor of said at least two resistors; wherein said circuitry generates [generating] said negative capacitance of a value to compensate for a capacitance associated with metal layers adjacent to said inductor layer, said circuitry being coupled to said inductor layer.

4.3.2. Claim 24. (new) The apparatus as claimed in claim 23 [[7]] , wherein said value of said negative capacitance is approximately equal in magnitude to said capacitance associated with metal layers adjacent to said inductor layer.

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4.3.3. Claim 25. (new) The apparatus as claimed in claim 23 [[9]], wherein said at least two transistors are at least one of bipolar transistors, MOSFETS, and gallium arsenide pseudomorphic high-electron mobility transistors.

4.3.4 Claim 26. (new) The apparatus as claimed in claim 23 [[9]], wherein said negative capacitance generated by said circuitry is dependent upon a component values of said at least two resistors and said capacitor.

4.3.5 Claim 27. (new) The apparatus as claimed in claim 26 [[11]], wherein said negative capacitance generated by said circuitry is dependent upon a ratio of the [[a]] first resistor to a second resistor of said at least two resistors multiplied by a value of said capacitor.

4.3.6. Claim 28. (new) The apparatus as claimed in claim 23 [[7]], wherein said circuitry is fabricated within the substrate.

4.3.7. Claim 29. (new) The apparatus, [An integrated circuit] comprising: a substrate disposed within said housing; a plurality of metal layers, a first metal layer of said plurality of metal layers being disposed on said substrate; an inductor layer disposed within said plurality of metal layers; a circuitry for generating a negative capacitance, said circuitry comprising: at least two transistors; at least two resistors; each resistor of said at least two resistors being coupled to each at least transistors;

and a capacitor coupled to a first transistor of said two transistors and a first resistor of said at least two resistors; wherein said circuitry generates [generating] said negative capacitance of a value approximately equal in magnitude to a capacitance associated with metal layers adjacent to said inductor layer, said circuitry being fabricated within said substrate, said circuitry being coupled to said inductor layer.

4.3.8. Claim 30. (new) The apparatus, as claimed in claim 29 [[15]], wherein said at least two transistors are at least one of bipolar transistors, MOSFETS, and gallium arsenide pseudomorphic high-electron mobility transistors.

4.3.9. Claim 31. (new) The apparatus as claimed in claim 29 [[15]], wherein said negative capacitance generated by said circuitry is dependent upon component values of said at least two resistors and said capacitor.

4.3.10. Claim 32 (new) The apparatus as claimed in claim 31 [[17]], wherein said negative capacitance generated by said circuitry is dependent upon a ratio of a first resistor to a second resistor of said at least two resistors multiplied by a value of said capacitor.

Allowed Claims

5.1. Claims 1- 2, 4-6 and 21-32 are allowed.

5.2. The following is a statement of reasons for the indication of allowance:

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Newly added limitations in combination with other claimed limitations in independent claims 1-4 are not disclosed or suggested by the prior art.

5.3. Rejoining and allowing claims 23-32.

Claims 7, 8, 10-14 and 16-18 withdrawn from consideration pursuant to the restriction requirement, have been rejoined because they contain similar allowed subject matter to the elected claims as explained in the reason for allowance. Since these claims were cancelled, they have been added back as claims 23-32 and amended to include all of the allowable combinations.

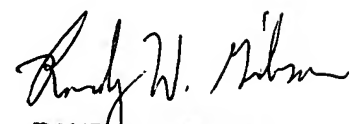
6.1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuriy Semenenko whose telephone number is (571) 272-6106. The examiner can normally be reached on 8:30am - 5:00pm.

6.2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571)- 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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6.3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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RANDY W. GIBSON
PRIMARY EXAMINER